October 9, 2002

MODIS sensor Working Group (MsWG) Summary

Attendance: Bob Barnes, Stuart Biggar, Vincent Chiang, Roger Drake, Wayne Esaias, Bob Evans, Bruce Guenther, Gerhard Meister, Chris Moeller, Junqiang Sun, Gary Toller, Jack Xiong, Eric Vermote, Zhengming Wan, Joe Esposito

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Scheduled Items

Item 1 Instrument Status (Aqua and Terra)

BB) Both Terra and Aqua look okay. No problems have been observed and the instruments are fairly stable. There is still work being done on Aqua lost commands.

RD) A patch has been added to the Aqua IM_OK on-board code and an additional patch will be added changing the command ordering.

JX) MCST has seen no events after changing to the Bside formatter

BB) Was there any science data loss when duplicate data packages were sent during high rates of formatter errors

JX) No evidence of this affecting the science data has been seen. MCST is trending the daily number of missing scans and duplicate packages of data being sent. No problems are seen in the trended values.

There are currently no new out-of-family detectors for either instrument.

Item 2 LUTs Related Issues (Aqua and Terra)

Aqua delivered

Terra LUT to Miami ready for delivery

Terra LUT to DAAC for forward process will be prepared

JX) The Aqua L1B LUTs have been delivered to the DAAC which include updated B32-36 LUT values

Terra LUTs for Miami have been delivered to Alice (L1B) and should be sent to Miami tomorrow. The new Miami RSB LUTs uses the best m1 fits for B8-16. The RSB LUTs should not be used past September 6, 2002 (2002249). This is due to Terra degradation flattening after August 15, 2002 (2002227).

The first month or so of the mission (after 2000055 NADIR opening) is not fit well by the current Miami and DAAC deliveries (the current delivery starts for the consistent year).

WE)Since the table does not work after September 6, 2002, what is being done in the forward processing at the DAAC?

JX) The new (incremental) table will be sent to the DAAC to adjust the forward processing.

WE)Then the current data (forward process) is not validated (provisional validation).

JX) This is correct but errors would build up unless an adjustment is made whenever needed.

BE) To be clear on this, the L1B at the DAAC is version 4.0.9 (JX – The LUTs are the same as 4.0.7; a minor code change is included which changes the version number). Anything we do at Miami for collect 5 should be held until the DAAC catches up.

Item 3 Early Aqua MODIS Vicarious Calibration (U. of AZ)

SB) Plot 1: Aqua reflectance based results

Plot 2: Terra reflectance based results
Plot 3: Terra, Aqua, and ETM+ comparison
Aqua seems to be significantly different when compared to Terra and ETM+.

JX) Several points (dates) are different in plot 1. MCST sees that Aqua > Terra in our analysis. MCST will look at the moon and is analyzing SDSM data to compare Terra and Aqua. Findings will be presented in the coming weeks.
BG) Do you see this in your analysis Eric?
EV) Haven't looked at enough Aqua data yet.
WE)How is Arizona handling polarization.
SB) Arizona is analyzing the data within 20° of NADIR over a fairly uniform area. We use different sets of detectors every (vicarious) measurement.
EV) The spread of the Aqua data is large. Do you have any idea of the cause of the spread (can the spread be due to BRDF)?
SB) Arizona does not think so but will look into this.
BB) Is there any difference in ocean color?
BE) Miami is not far enough through the calculations (radcorr files).

Around the Table

Participant: Bruce Guenther – I will be at a MISR meeting on 10/22. Wish to see EV scene with several instruments. What range of S/C pitch, roll, and yaw can be handled?
RD) Have to model trajectory of instrument that is not simple to determine (sun position dependence, etc.)

Participant: Eric Vermote – Received the file MCST sent. Will look at aqua

Participant: Chris Moeller – As per Bruce's comments of last week, we have started to look at moonshine on clouds.
JX) MCST has ordered data to analyze this.
JX) In regard to the B5 x B26 analysis, MCST has looked at B6, B7 and B26. MCST will look at this and apply results to m_1 and Earth scene.

Participant: Bob Evans – Miami is currently validating radcorr.

Participant: Zhengming Wan – We are doing a field campaign next month
JX) Would be nice to see what the difference is between Terra and Aqua

No MsWG Meeting Next Week

Compiled by J. A. Esposito October 9, 2002